Appl. No. 10/631,195
Amdt. Dated July 6, 2006
Reply to Office Action of February 10, 2006

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Original) A system, comprising:

memory device;

counter coupled to the memory device, wherein the counter is adapted to monitor

memory consumption of the memory device for one or more programs;

a plurality of processors coupled to the counter, wherein one of the plurality of

processors within the system is coupled to a garbage collector adapted to

free a portion of unused memory; and

wherein executing the garbage collector is triggered based on a value of the

counter.

2.   (Original) The system of claim 1, wherein the value is a programmable threshold value,

and wherein when the counter reaches the programmable value, the garbage collector is triggered.

3.   (Original) The system of claim 2, wherein upon reaching the programmable threshold

value, the counter sends an interrupt value to the processor, which executes the garbage collector.

6

Appl. No. 10/631,195
Amdt. Dated July 6, 2006
Reply to Office Action of February 10, 2006

4.   (Original) The system of claim 2, wherein a software process is regularly polling the

counter to check if the predetermined threshold value has been reached, and wherein upon

reaching the predetermined threshold value, the garbage collector is triggered.

5.   (Original) The system of claim 1, wherein the system further comprises a decoder coupled

to the counter, wherein upon decoding an instruction requesting memory allocation, the counter is

updated with an estimated memory usage value for the instruction.

6.   (Original) The system of claim 1, wherein the system further comprises a micro-sequence

replacing an instruction requesting memory allocation, wherein upon executing an instruction

from the micro-sequence requesting memory allocation, the counter is updated with an exact

memory usage value for the instruction.

7.   (Original) The system of claim 6, wherein the counter is updated by a value stored within

the memory device.

8.   (Original) The system of claim 1, wherein a software process is triggered by an instruction

that requests memory allocation, and wherein prior to performing or requesting another memory

allocation task, the software process increments a counter indicative of the memory consumed.

7

Appl. No. 10/631,195
Amdt. Dated July 6, 2006
Reply to Office Action of February 10, 2006

9.   (Currently Amended) A computer-readable media comprising a plurality of instructions

that, when executed by a processor, perform a A method, comprising:

monitoring memory consumption of a memory device for one or more programs;

triggering a garbage collector to free a portion of the memory upon surpassing a

threshold value; and

updating a memory usage counter after retrieving a portion of the memory.

10.   (Currently Amended) The method computer-readable media of claim ~~10~~9, wherein the

method further comprises decoding an instruction requesting memory allocation.

11.   (Currently Amended) The method computer-readable media of claim ~~11~~10, wherein the

instruction is a standard Java instruction, and wherein the counter is updated with an estimated

memory usage value for the instruction.

12.   (Currently Amended) The method computer-readable media of claim 11, wherein the

instruction belongs to a micro-sequence, and wherein the counter is update with an exact memory

usage value for the instruction.

13.   (Currently Amended) The method computer-readable media of claim 10, wherein the step

of triggering the garbage collector further comprises periodic monitoring of the memory usage

counter.

8

Appl. No. 10/631,195
Amdt. Dated July 6, 2006
Reply to Office Action of February 10, 2006

14.   (Currently Amended) The ~~method~~ computer-readable media of claim 10, where the step of triggering the garbage collector comprises receiving a request from memory usage counter when the step of monitoring the memory consumption reaches a programmable threshold value.

15.   (Original) A system, comprising:

> processor coupled to a garbage collector adapted to free unused memory
> resources for one or more programs;
> counter coupled to the processor, wherein the counter is adapted to monitor
> memory consumption for the one or more programs; and
> wherein upon surpassing a threshold value, the counter triggers the garbage
> collector.

16.   (Original) The system of claim 15, wherein the system further comprises a decoder coupled to the counter, and wherein the decoder provides information to update the counter.

17.   (Original) The system of claim 16, wherein the decoder decodes a standard Java instruction requesting memory allocation.

18.   (Original) The system of claim 17, wherein the counter is updated with an approximate

9

memory usage value.

19.   (Original) The system of claim 16, wherein the decoder decodes an instruction from a

micro-sequence requesting memory allocation.

20.   (Original) The system of claim 19 and wherein the counter is updated with an exact

memory usage value.

21.   (Original) The system of claim 15, wherein the counter is monitored periodically by a

software process, and upon reaching the threshold value, the software process triggers the

garbage collector.

22.   (Original) The system of claim 15, wherein the processor is a main processor.

23.   (Original) The system of claim 22, wherein the system further comprises a co-processor

coupled to the main processor, wherein the co-processor is adapted to provide an interrupt signal

to the main processor when the counter surpasses the threshold value.

24.   (Original) The system of claim 23, wherein the main processor initiates the garbage

collector upon receipt of the interrupt signal.

10

178072.01/1962.05419

Appl. No. 10/631,195
Amdt. Dated July 6, 2006
Reply to Office Action of February 10, 2006

25.   (Original) The system of claim 15, wherein the system is a cellular telephone.

11